

## Re-Calculation of Educational Attainment in the 2004 Panel of SIPP.

(posted 10/9/09)

During processing of the 2008 panel data an error was discovered that affects the measurement of educational attainment. The error has been corrected for the 2008 panel, but remains uncorrected in the 2004 data.

In order to correct the processing error, data users should make the following changes to the variable EEDUCATE, based on the variable RCOLLVOC:

```
Set EDUC2 = EEDUCATE

If EEDUCATE = 41, then,
    if RCOLLVOC = 1 set EDUC2=38
    if RCOLLVOC = 2 set EDUC2=39
    if 3 <= RCOLLVOC <= 4 set EDUC2=40

If EEDUCATE < 41, then,
    if 6 <= RCOLLVOC <= 9 set EDUC2=41
```

The variable EDUC2 should be used in place of EEDUCATE in subsequent analyses.

### *Background*

The discussion below gives the reason a change to EEDUCATE is needed, and provides tabulations showing the effect of this change.

The error arose from the use of a revised 2004 question on attainment that, unlike the question from previous panels, does not include a category for a “certificate or diploma from a vocational, technical, trade or business school beyond high school.” In 2004 and subsequent panels, information on completion of vocational education is collected in a separate pair of questions. The text of the relevant questions from 2001 and 2004 are appended to this document.

The 2004 variable EEDUCATE was created with information from the basic education question and the pair of vocational education questions that follow. Respondents who indicated they completed a vocational degree had their educational attainment updated to reflect this, unless they had already attained an Associate’s or higher degree, which is to say, people were given the higher level of the two they indicated on the basic education question and the vocational degree completion question. At the same time, the two levels of “some college” collected in the 2004 basic question were collapsed together in the education variable that appears on the file (EEDUCATE). The net effect is that the response categories of EEDUCATE are conceptually the same in 2004 as they were in 2001. On a practical basis, however, there are more people recorded as having a vocational degree as their highest education in 2004 than in 2001 due to the higher response level to the separate question on vocational degrees.

In creating the 2004 version of EEDUCATE, two problems occurred. First, the edit specification did not prevent contradictory information from being imputed when responses to education

questions were missing. People who did not report an education level could be imputed to have a vocational degree even when they said “no” to the vocational question. Conversely, people who had less than a vocational degree did not have their education updated when they were imputed to have answered “yes” to the vocational question. This part of the problem affected a relatively small number of cases (ranging from 40 to 200 in a given wave), some of which have their education levels raised, and others that have their education levels lowered from what they should be.

The second problem was a coding error that resulted in people who reported having 1 year or more of college but no degree and a vocational certificate to be recorded in EEDUCATE as having “some college” rather than “vocational certificate.” This affects a fairly large number of cases (800 to 2500 in a given wave), all of whom are recorded erroneously “some college” when their highest education level is actually “vocational certificate.”

These two different problems are labeled Group A and Group B in the listing below, which shows the exact number of cases affected in each wave.

Wave	Unweighted		Weighted (000)	
	Group A	Group B	Group A	Group B
1	212	2361	544.8	6027.2
2	189	2235	529.8	6069.8
3	97	2124	253.0	5948.6
4	88	2087	213.4	5997.9
5	107	2029	263.4	6007.2
6	117	2002	299.9	6000.3
7	98	1943	268.7	5955.8
8	86	1937	246.5	6102.0
9	49	873	292.4	6098.1
10	38	854	222.4	6108.1
11	50	822	268.7	6045.3
12	43	838	189.9	6047.9

The fix to the variable EEDUCATE involves the variable RCOLLVOC. RCOLLVOC is a recode variable that is intended to allow analysts to reconstruct information about education levels that was gathered in the separate questions on educational attainment and vocational degrees. Categories 1-5 of RCOLLVOC code levels of education attained by people who did not get a vocational degree. Categories 6-10 of RCOLLVOC code levels of education attained by people who did get a vocational degree. For more information, refer to the data dictionary.

## **Appendix 1: Educational attainment related questions.**

### **EDUCATIONAL ATTAINMENT QUESTION 2001 PANEL**

What is the highest level of school [name] has completed or the highest degree he/she has received?

- (31) Less than 1st grade
- (32) 1st,2nd,3rd or 4th grade
- (33) 5th or 6th grade
- (34) 7th or 8th grade
- (35) 9th grade
- (36) 10th grade
- (37) 11th grade
- (38) 12th grade, no diploma
- (39) HIGH SCHOOL GRADUATE - high school DIPLOMA or equivalent (For example: GED)
- (40) Some college but no degree
- (41) Diploma or certificate from a vocational, technical, trade or business school beyond the High School level
- (42) Associate degree in college - Occupational/vocational program
- (43) Associate degree in college - Academic program
- (44) Bachelors degree (For example: BA, AB, BS)
- (45) Master's degree (For example:MA, MS, MEng, MEd, MSW, MBA)
- (46) Professional School Degree (For example: MD,DDS,DVM,LLB,JD)
- (47) Doctorate degree (For example: PhD, EdD)

### **EDUCATIONAL ATTAINMENT QUESTION 2004 PANEL**

What is the highest level of school [name] has completed or the highest degree he/she has received?

- (31) Less than 1st grade
- (32) 1st, 2nd, 3rd or 4th grade
- (33) 5th or 6th grade
- (34) 7th or 8th grade
- (35) 9th grade
- (36) 10th grade
- (37) 11th grade
- (38) 12th grade, no diploma
- (39) HIGH SCHOOL GRADUATE (diploma or GED or equivalent)
- (40) Some college credit, but less than 1 year
- (41) 1 or more years of college, no degree (regular Jr.coll./coll./univ.)
- (43) Associate (2-yr) college degree (include academic/occupational degree)
- (44) Bachelor's degree (for example: BA, AB, BS)
- (45) Master's degree (for example: MA, MS, MENG, Med, MSW, MBA)
- (46) Professional School degree (for example: MD(doctor), DDS(dentist), JD(lawyer))
- (47) Doctorate degree (for example: Ph.D., Ed.D.)

### **VOCATIONAL ENROLLMENT/COMPLETION QUESTIONS 2004 PANEL**

Has [name] ever attended a vocational, technical, trade, or business school beyond high school?

(1) Yes

(2) No

Has [name] received a diploma or certificate from a vocational, technical, trade, or business school?

(1) Yes

(2) No

## Appendix 2: Uncorrected and Corrected Distributions of EEDUCATE by Wave, 2004 Panel.

Wave=w01: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	315	848
1st, 2nd, 3rd or 4th grade	735	2,060
5th Or 6th Grade	1,453	4,284
7th Or 8th Grade	3,335	8,325
9th Grade	2,990	7,619
10th Grade	3,619	8,993
11th Grade	3,522	8,853
12th grade, no diploma	1,531	3,884
High School Graduate	21,285	55,780
Some college, but no degree	14,566	39,259
Vocational, trade or bus. school	7,476	18,999
Associate degree	6,314	16,786
Bachelor's degree	12,282	33,592
Master's degree	4,613	12,442
Professional School degree	1,047	2,884
Doctorate degree	764	1,982

Wave=w01: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	315	848
1st, 2nd, 3rd or 4th grade	735	2,060
5th Or 6th Grade	1,452	4,282
7th Or 8th Grade	3,331	8,314
9th Grade	2,986	7,609
10th Grade	3,617	8,987
11th Grade	3,516	8,843
12th grade, no diploma	1,529	3,876
High School Graduate	21,199	55,562
Some college, but no degree	12,172	33,158
Vocational, trade or bus. school	9,975	25,366
Associate degree	6,314	16,786
Bachelor's degree	12,282	33,592
Master's degree	4,613	12,442
Professional School degree	1,047	2,884
Doctorate degree	764	1,982

Wave=w02: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	264	785
1st, 2nd, 3rd or 4th grade	607	1,905
5th Or 6th Grade	1,216	3,936
7th Or 8th Grade	2,606	6,953
9th Grade	2,516	6,823
10th Grade	3,169	8,390
11th Grade	3,034	7,964
12th grade, no diploma	891	2,459
High School Graduate	22,279	62,306
Some college, but no degree	13,524	38,844
Vocational, trade or bus. school	6,909	18,783
Associate degree	5,921	16,864
Bachelor's degree	11,599	33,941
Master's degree	4,359	12,647
Professional School degree	973	2,899
Doctorate degree	709	2,009

Wave=w02: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	264	785
1st, 2nd, 3rd or 4th grade	607	1,905
5th Or 6th Grade	1,216	3,936
7th Or 8th Grade	2,601	6,929
9th Grade	2,515	6,820
10th Grade	3,169	8,390
11th Grade	3,027	7,949
12th grade, no diploma	891	2,456
High School Graduate	22,249	62,231
Some college, but no degree	11,269	32,733
Vocational, trade or bus. school	9,207	25,016
Associate degree	5,921	16,864
Bachelor's degree	11,599	33,941
Master's degree	4,359	12,647
Professional School degree	973	2,899
Doctorate degree	709	2,009

Wave=w03: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	231	718
1st, 2nd, 3rd or 4th grade	543	1,759
5th Or 6th Grade	1,054	3,598
7th Or 8th Grade	2,419	6,660
9th Grade	2,637	7,377
10th Grade	2,982	8,174
11th Grade	2,739	7,423
12th grade, no diploma	658	1,892
High School Graduate	22,116	64,339
Some college, but no degree	13,013	39,037
Vocational, trade or bus. school	6,606	18,690
Associate degree	5,693	16,936
Bachelor's degree	11,242	34,176
Master's degree	4,221	12,809
Professional School degree	948	2,922
Doctorate degree	696	2,039

Wave=w03: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	231	718
1st, 2nd, 3rd or 4th grade	543	1,759
5th Or 6th Grade	1,054	3,598
7th Or 8th Grade	2,419	6,660
9th Grade	2,637	7,377
10th Grade	2,982	8,174
11th Grade	2,738	7,422
12th grade, no diploma	658	1,892
High School Graduate	22,189	64,534
Some college, but no degree	10,884	33,076
Vocational, trade or bus. school	8,663	24,457
Associate degree	5,693	16,936
Bachelor's degree	11,242	34,176
Master's degree	4,221	12,809
Professional School degree	948	2,922
Doctorate degree	696	2,039

Wave=w04: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	224	725
1st, 2nd, 3rd or 4th grade	502	1,656
5th Or 6th Grade	988	3,348
7th Or 8th Grade	2,705	7,541
9th Grade	2,512	7,167
10th Grade	2,851	7,873
11th Grade	2,573	7,149
12th grade, no diploma	596	1,730
High School Graduate	21,934	65,170
Some college, but no degree	12,790	39,297
Vocational, trade or bus. school	6,414	18,601
Associate degree	5,577	17,008
Bachelor's degree	11,006	34,279
Master's degree	4,128	12,828
Professional School degree	934	2,982
Doctorate degree	687	2,086

Wave=w04: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	224	725
1st, 2nd, 3rd or 4th grade	502	1,656
5th Or 6th Grade	986	3,346
7th Or 8th Grade	2,704	7,539
9th Grade	2,511	7,164
10th Grade	2,849	7,870
11th Grade	2,572	7,145
12th grade, no diploma	596	1,730
High School Graduate	21,987	65,332
Some college, but no degree	10,695	33,285
Vocational, trade or bus. school	8,463	24,465
Associate degree	5,577	17,008
Bachelor's degree	11,006	34,279
Master's degree	4,128	12,828
Professional School degree	934	2,982
Doctorate degree	687	2,086

Wave=w05: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	215	707
1st, 2nd, 3rd or 4th grade	477	1,664
5th Or 6th Grade	943	3,311
7th Or 8th Grade	2,173	6,213
9th Grade	2,304	6,561
10th Grade	2,708	7,635
11th Grade	2,491	7,047
12th grade, no diploma	534	1,624
High School Graduate	22,295	67,822
Some college, but no degree	12,606	39,768
Vocational, trade or bus. school	6,247	18,462
Associate degree	5,393	16,812
Bachelor's degree	10,795	34,665
Master's degree	4,079	13,029
Professional School degree	913	2,988
Doctorate degree	667	2,076

Wave=w05: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	214	706
1st, 2nd, 3rd or 4th grade	477	1,664
5th Or 6th Grade	942	3,310
7th Or 8th Grade	2,173	6,213
9th Grade	2,304	6,561
10th Grade	2,708	7,635
11th Grade	2,491	7,047
12th grade, no diploma	534	1,625
High School Graduate	22,361	68,022
Some college, but no degree	10,576	33,759
Vocational, trade or bus. school	8,213	24,272
Associate degree	5,393	16,812
Bachelor's degree	10,795	34,665
Master's degree	4,079	13,029
Professional School degree	913	2,988
Doctorate degree	667	2,076

Wave=w06: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	208	680
1st, 2nd, 3rd or 4th grade	444	1,545
5th Or 6th Grade	866	3,115
7th Or 8th Grade	2,221	6,314
9th Grade	2,392	6,797
10th Grade	2,622	7,519
11th Grade	2,466	7,153
12th grade, no diploma	485	1,471
High School Graduate	22,044	68,054
Some college, but no degree	12,582	40,270
Vocational, trade or bus. school	6,159	18,516
Associate degree	5,333	16,948
Bachelor's degree	10,629	34,868
Master's degree	4,057	13,179
Professional School degree	876	2,927
Doctorate degree	658	2,082

Wave=w06: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	208	680
1st, 2nd, 3rd or 4th grade	444	1,545
5th Or 6th Grade	866	3,115
7th Or 8th Grade	2,221	6,314
9th Grade	2,392	6,797
10th Grade	2,621	7,518
11th Grade	2,466	7,153
12th grade, no diploma	487	1,474
High School Graduate	22,097	68,238
Some college, but no degree	10,575	34,264
Vocational, trade or bus. school	8,112	24,336
Associate degree	5,333	16,948
Bachelor's degree	10,629	34,868
Master's degree	4,057	13,179
Professional School degree	876	2,927
Doctorate degree	658	2,082

Wave=w07: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	196	648
1st, 2nd, 3rd or 4th grade	417	1,487
5th Or 6th Grade	805	2,953
7th Or 8th Grade	2,361	6,759
9th Grade	2,329	6,879
10th Grade	2,503	7,340
11th Grade	2,365	6,985
12th grade, no diploma	490	1,557
High School Graduate	21,821	68,437
Some college, but no degree	12,225	40,124
Vocational, trade or bus. school	6,024	18,496
Associate degree	5,267	17,184
Bachelor's degree	10,455	35,004
Master's degree	4,006	13,235
Professional School degree	887	2,997
Doctorate degree	658	2,130

Wave=w07: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	196	648
1st, 2nd, 3rd or 4th grade	416	1,487
5th Or 6th Grade	804	2,948
7th Or 8th Grade	2,361	6,759
9th Grade	2,329	6,879
10th Grade	2,503	7,340
11th Grade	2,365	6,985
12th grade, no diploma	490	1,557
High School Graduate	21,877	68,635
Some college, but no degree	10,274	34,153
Vocational, trade or bus. school	7,921	24,277
Associate degree	5,267	17,184
Bachelor's degree	10,455	35,004
Master's degree	4,006	13,235
Professional School degree	887	2,997
Doctorate degree	658	2,130

Wave=w08: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	183	623
1st, 2nd, 3rd or 4th grade	381	1,376
5th Or 6th Grade	776	2,848
7th Or 8th Grade	1,876	5,596
9th Grade	2,173	6,453
10th Grade	2,507	7,331
11th Grade	2,237	6,707
12th grade, no diploma	428	1,386
High School Graduate	22,283	70,545
Some college, but no degree	12,177	40,441
Vocational, trade or bus. school	5,900	18,337
Associate degree	5,235	17,177
Bachelor's degree	10,543	35,717
Master's degree	4,018	13,337
Professional School degree	908	3,087
Doctorate degree	656	2,131

Wave=w08: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	183	623
1st, 2nd, 3rd or 4th grade	381	1,376
5th Or 6th Grade	776	2,848
7th Or 8th Grade	1,876	5,596
9th Grade	2,173	6,453
10th Grade	2,507	7,331
11th Grade	2,237	6,707
12th grade, no diploma	428	1,386
High School Graduate	22,343	70,725
Some college, but no degree	10,236	34,330
Vocational, trade or bus. school	7,781	24,268
Associate degree	5,235	17,177
Bachelor's degree	10,543	35,717
Master's degree	4,018	13,337
Professional School degree	908	3,087
Doctorate degree	656	2,131

Wave=w09: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	95	679
1st, 2nd, 3rd or 4th grade	205	1,312
5th Or 6th Grade	390	2,860
7th Or 8th Grade	926	5,761
9th Grade	1,025	6,574
10th Grade	1,175	7,456
11th Grade	1,024	6,528
12th grade, no diploma	202	1,334
High School Graduate	10,448	70,165
Some college, but no degree	5,658	40,921
Vocational, trade or bus. school	2,730	18,342
Associate degree	2,377	17,169
Bachelor's degree	4,817	36,208
Master's degree	1,816	13,399
Professional School degree	414	3,094
Doctorate degree	307	2,236

Wave=w09: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	95	679
1st, 2nd, 3rd or 4th grade	205	1,312
5th Or 6th Grade	389	2,851
7th Or 8th Grade	926	5,761
9th Grade	1,025	6,574
10th Grade	1,175	7,456
11th Grade	1,024	6,528
12th grade, no diploma	202	1,334
High School Graduate	10,478	70,379
Some college, but no degree	4,779	34,799
Vocational, trade or bus. school	3,580	24,260
Associate degree	2,377	17,169
Bachelor's degree	4,817	36,208
Master's degree	1,816	13,399
Professional School degree	414	3,094
Doctorate degree	307	2,236

Wave=w10: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	90	656
1st, 2nd, 3rd or 4th grade	195	1,272
5th Or 6th Grade	383	2,976
7th Or 8th Grade	981	6,247
9th Grade	990	6,507
10th Grade	1,130	7,365
11th Grade	1,005	6,618
12th grade, no diploma	205	1,437
High School Graduate	10,137	69,894
Some college, but no degree	5,578	41,391
Vocational, trade or bus. school	2,627	17,938
Associate degree	2,343	17,541
Bachelor's degree	4,677	36,454
Master's degree	1,786	13,575
Professional School degree	404	3,101
Doctorate degree	300	2,224

Wave=w10: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	90	656
1st, 2nd, 3rd or 4th grade	195	1,272
5th Or 6th Grade	383	2,976
7th Or 8th Grade	981	6,247
9th Grade	990	6,507
10th Grade	1,130	7,365
11th Grade	1,005	6,618
12th grade, no diploma	205	1,437
High School Graduate	10,162	70,069
Some college, but no degree	4,721	35,263
Vocational, trade or bus. school	3,459	23,891
Associate degree	2,343	17,541
Bachelor's degree	4,677	36,454
Master's degree	1,786	13,575
Professional School degree	404	3,101
Doctorate degree	300	2,224

Wave=w11: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	90	691
1st, 2nd, 3rd or 4th grade	190	1,320
5th Or 6th Grade	359	2,752
7th Or 8th Grade	770	5,153
9th Grade	929	6,340
10th Grade	1,034	6,756
11th Grade	972	6,615
12th grade, no diploma	202	1,456
High School Graduate	10,099	71,284
Some college, but no degree	5,469	41,605
Vocational, trade or bus. school	2,585	18,044
Associate degree	2,296	17,431
Bachelor's degree	4,708	37,219
Master's degree	1,790	13,877
Professional School degree	418	3,242
Doctorate degree	305	2,304

Wave=w11: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	90	691
1st, 2nd, 3rd or 4th grade	190	1,320
5th Or 6th Grade	358	2,747
7th Or 8th Grade	770	5,153
9th Grade	928	6,337
10th Grade	1,034	6,756
11th Grade	972	6,615
12th grade, no diploma	202	1,456
High School Graduate	10,137	71,497
Some college, but no degree	4,647	35,562
Vocational, trade or bus. school	3,371	23,882
Associate degree	2,296	17,431
Bachelor's degree	4,708	37,219
Master's degree	1,790	13,877
Professional School degree	418	3,242
Doctorate degree	305	2,304

Wave=w12: Original (Uncorrected) Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Uncorrected)		
Less Than 1st Grade	84	631
1st, 2nd, 3rd or 4th grade	174	1,187
5th Or 6th Grade	328	2,561
7th Or 8th Grade	802	5,274
9th Grade	948	6,401
10th Grade	1,032	6,852
11th Grade	943	6,349
12th grade, no diploma	199	1,442
High School Graduate	10,149	71,913
Some college, but no degree	5,516	41,790
Vocational, trade or bus. school	2,595	18,060
Associate degree	2,355	17,759
Bachelor's degree	4,744	37,334
Master's degree	1,825	14,091
Professional School degree	401	3,101
Doctorate degree	298	2,322

Wave=w12: Corrected Education Distribution

	Unweighted	Weighted
	Total	Total (000)
EEDUCATE (Corrected)		
Less Than 1st Grade	84	631
1st, 2nd, 3rd or 4th grade	174	1,187
5th Or 6th Grade	328	2,561
7th Or 8th Grade	802	5,274
9th Grade	948	6,401
10th Grade	1,032	6,852
11th Grade	943	6,349
12th grade, no diploma	199	1,442
High School Graduate	10,180	72,071
Some college, but no degree	4,678	35,743
Vocational, trade or bus. school	3,402	23,949
Associate degree	2,355	17,759
Bachelor's degree	4,744	37,334
Master's degree	1,825	14,091
Professional School degree	401	3,101
Doctorate degree	298	2,322